This Page Is Inserted by IFW Operations and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

In the Specification

Please delete the paragraph beginning on page 11, line 1 and replace it with the following paragraph:

Halogenated derivatives of all a forementioned aformentioned active-hydrogen containing compounds such as chlorinated derivatives and brominated derivatives may also be used.

Please delete the paragraph beginning on page 12, line 15 and replace it with the following paragraph:

The optical materials provided by this invention may also be made photochromic through incorporation of naphopyran compounds, spiro compounds, indoline compounds, and/or other such photochromic materials. The aforementioned photochromic materials may be incorporated into the enhanced optical materials disclosed in this patent through tinting, mixing with monomer components before or during polymerization, thermal transfer, or some other such technique. European patent application 88304403.4 discusses improved fatigue resistance for reversible cleavage photochromics when incorporated into polyurethane plastics, especially thermosetting polyurethanes. The present invention offers several avantages over polyurethanes or polythiourehtanes for use to photochromic optical products. First, the terpolymer discussed in this invention offers all of the advantages of polyurethanes and polythiourethanes for reducing fatigue through the reduction of irreversible side reactions, with the additional

advantage that inclusion of the polyene monomer eliminates possible mercapto end groups which may lead to irreversible side reactions with the photochromic materials. The materials provided by this invention are also much more readily tintable relatively lower temperatures than optical polyurethane polythiourethane resins; thus for incorporation of photochromic materials into the enhanced optical resin of this invention through tinting, thermal transfer, or some other such technique, elevated temperatures, which may lead to serious degradation of many photochromic materials, are usually not required. The enhanced tintability of these optical materials may also lead to other advantages over other materials for photocromic optical products.

Please delete the paragraph beginning on page 13, line 23 and replace it with the following paragraph:

Since the monomer components may separate into two or more phases in the mold using conventional procedures, the curing reaction between the components may be allowed to proceed somewhat during mixing preferably after mixing of the active hydrogen group component or component mixture and polyene-polyisocyanate mixture, so that the two components make up a single uniform phase before pouring into the mold. While the liquid mixture is preferably degassed after mixing, bubbles may still form in the mold depending on the type of monomers and the reaction conditions. In order to avoid such a phenomenon, it is necessary to conduct the polymerization reaction while effecting sufficient heat removal and

precise temperature control. Although the reaction time and the reaction temperature vary depending upon the combination of components, the components, the polymerization is generally carried out at -20°C to 150°C for 24 to 72 hours. The hardness of the polymer resulting from the reaction reaches the maximum at a time where the polymerization reaction is complete and it does not increase beyond that maximum level. The polymerization may be stopped at or before the abovementioned time or at any time as long as the resultant resin has the desired refractive index and Abbe number properties as an eyeglass lens or other optic product.

Please delete the paragraph beginning on page 17, line 1 and replace it with the following paragraph:

Example 5:

Into a 100ml three-necked round bottom flask equipped with a dropping funnel, a thermometer, a condenser, and a magnetic stirrer wereadded—were added 1.50g (16 mmol) of 1,2-ethanedithiol and 6g of dimethyl formamide (DMF). The solution was heated to 80°C. A room temperature solution of 1.13g (6mmol) of m-xylylene diisocyanate in 2 g DMF was added drop wise over 15 minutes and the temperature maintained at 80°C. After the reaction mixture was stirred for 1 hour at 80°C, 1.54g (10 mmol) of methylene-bisacrylamide at 80°C was added at one time. The reaction was continued for 12 hours at about 90°C. The mixture was precipitated in cold water and 15—the polymer separated by filtration. The solid reaction product was a white powder after being dried in vacuum. The polymer has

Tg of 110°C and can be injection molded or compression molded into optical lenses which have a refractive index of 1.62 and an Abbe's number of 34.